

COUNTRY ANALYSIS BRIEFS

Brunei

Last Updated: March 2006

Background

Brunei is a large liquefied natural gas producer (third largest in Asia) and is located close to vital sea lanes through the South China Sea linking the Indian and Pacific Oceans.

Brunei's small, wealthy economy is based heavily upon proceeds from exports of crude oil and natural gas, with revenues from the hydrocarbons sector accounting for half of gross domestic product (GDP), around 90 percent of merchandise exports, and 80 percent of government revenues. Per capita GDP places Brunei among the World Bank's high-income non-OECD group of countries, with substantial income from overseas investment supplementing income from domestic sources. The country's manufacturing sector is very small. The government provides for all medical services and subsidizes food and housing. Real GDP growth for 2005 is estimated to be 2.6 percent, up from the 1.7 percent growth reported in 2004.



Brunei's main economic problems include lack of diversity in the economy, heavy reliance on the volatile oil and natural gas sectors, huge state subsidies, a civil service which employs over half of Brunei's workforce, extensive state economic controls, a small tax base (the country has no personal income tax and a low tariff regime), and only slow movement towards privatization. In 1998, the collapse of Amedeo Development Corporation, run by Prince Jefri, and the loss of many billions of dollars caused a financial crisis.

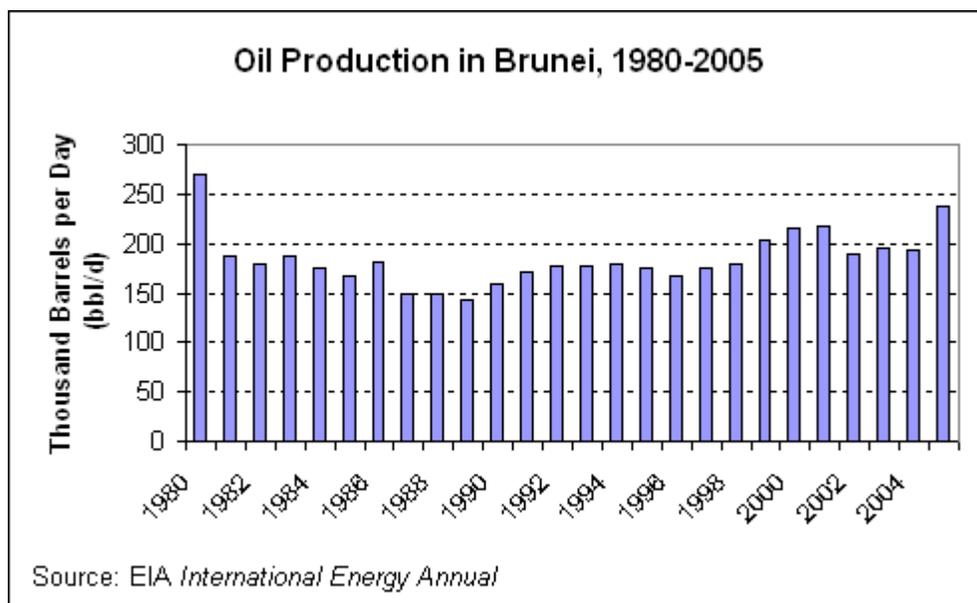
Brunei would like to diversify away from hydrocarbons into areas like communications technology, financial services, rubber, rice farming, halal (Muslim dietary law) food, and forestry services. Brunei is interested in energy-intensive industries like petrochemicals, oil refining, and aluminum smelting. Brunei also would like to turn itself into a major shipping hub. In January 2003, Brunei unveiled plans aimed at attracting \$4.5 billion in foreign investment by 2008 and at diversifying the economy. The Brunei Economic Development Board (BEDB) is looking at building a 500-megawatt power plant, a new jetty, and a container port in the Sungai Liang area both to tap into the country's natural gas resources as well as to help establish new industries. The country is located close to vital sea lanes through the South China Sea, linking the Indian and Pacific Oceans. As such, the country is potentially well-positioned to take advantage of international

shipping through the region.

Oil

BSP Shell, a joint venture of Royal Dutch Shell and the government of Brunei, is responsible for all oil production in the country.

Brunei contains proven crude oil reserves of 1.35 billion barrels, as estimated in January 2006. In 2005 Brunei produced 237,000 bbl/d, of which 215,000 bbl/d was crude oil, plus around 22,000 bbl/d of natural gas liquids. Oil production in Brunei began in 1929, with the discovery of the giant onshore Seria Field. Production from Seria peaked at around 115,000 bbl/d in the 1950s, but has now fallen to around 27,000 bbl/d. Brunei's oil production peaked in 1979 at about 240,000 bbl/d, but was cut back deliberately to extend life of the fields and to improve recovery rates. Overall, the country's upstream oil sector requires around \$300 million annually, according to the *Petroleum Economist*, in order simply to maintain current production capacity from mature fields.



Brunei's oil industry is completely dominated by Brunei Shell Petroleum (BSP). BSP extracts oil from seven offshore oil fields, including Champion (which contains about 40 percent of total oil reserves and produces around 50,000 bbl/d), Southwest Ampa (the oldest field, with more than half of Brunei's natural gas reserves and production), Fairley, Fairley-Baram, Gannet, Magpie (producing since 1977, now at 10,000 bbl/d), and Iron Duke. BSP also operates two onshore fields (Rasau and Seria-Tali). Another field, Egret, is expected to come online for oil production in 2006 and produce about 30 million barrels of oil over the next 15-20 years. Major customers for Brunei's oil include Japan, South Korea, the United States, Australia, New Zealand, China, and India.

BSP, a 50-50 joint venture between Royal Dutch/Shell and the government of Brunei, for years had been the only oil producer in the country and still operates the country's only oil refinery. Recently, the sector has opened to other players. In early 2002, for instance, Total, S.A. of France (which has been active in Brunei since the 1980s) was awarded an exploration license in Brunei's deepwater Block J, located around 60 miles offshore, along with partners BHP Billiton Petroleum (25 percent share) and Amerada Hess (15 percent).

Brunei has an outstanding territorial dispute with neighboring Malaysia over the deep-sea acreage that includes blocks J and K off the coast of Borneo. In June 2003, Total suspended exploration work in Block J, following an April 2003 incident in which several naval patrol boats from Malaysia chased away a Total ship. In 2003, Murphy Oil (U.S.) and Petronas (Malaysia) discovered a large (700-million-barrel) oil field -- called "Kikeh" -- which may extend into Block J. Brunei claims that Block J and the adjacent Block K (awarded to a joint venture of Shell, Conoco and Mitsubishi) are completely within its Exclusive Economic Zone (EEZ). Brunei is counting on Blocks J and K to maintain the country's oil and gas output another decade or more, and without these Blocks, Brunei may be forced to move more rapidly away from an economy based on hydrocarbons.

Malaysian officials have offered to devise a joint-development zone with Brunei, but this would necessitate Brunei redrawing its contracts with Shell, Conoco, and Mitsubishi. In March 2004

Shell Malaysia announced a new oil discovery at Gumusut, near the disputed territory. The status of oil development in these disputed areas remains unresolved.

Downstream

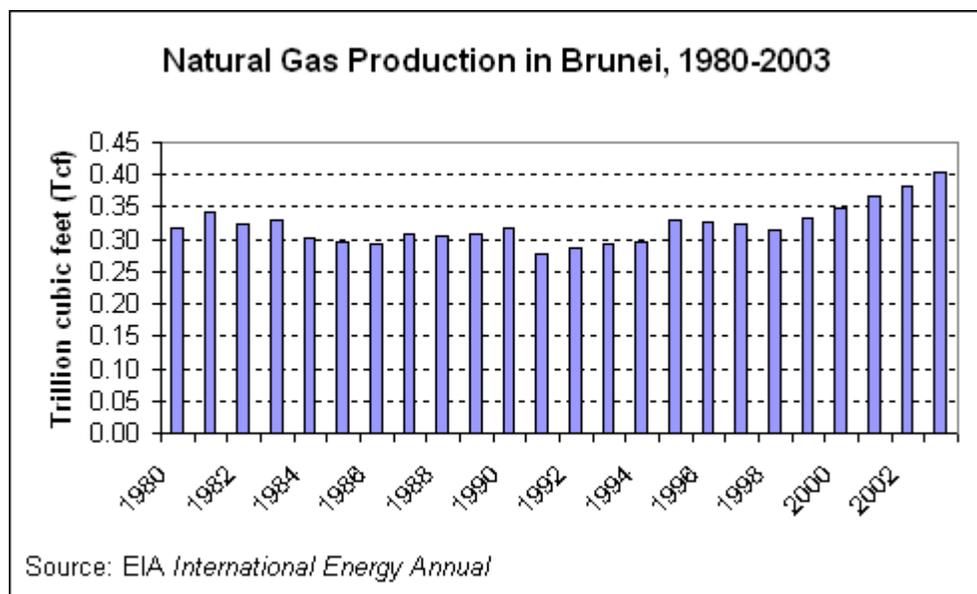
Brunei has one refinery, part of BSP, with a capacity of about 8,600 bbl/d. Around 5,000-6,000 bbl/d of the refinery's output is used for local consumption. The remainder of Brunei's crude oil is exported and refined elsewhere.

Natural Gas

Almost all of Brunei's natural gas production goes to its LNG export terminal.

Brunei produced around 400 billion cubic feet (Bcf) of natural gas in 2003. Around 90 percent of gas destined for the country's one LNG terminal is produced by BSP and the rest by Total S.A. Discussions are underway now to determine whether sales of gas to new domestic industrial customers would be economically advantageous over the current policy of exporting almost all of Brunei's gas production.

Brunei became the first Asian liquefied natural gas (LNG) exporter in 1972. Today, Brunei is the fourth-largest producer of LNG in the world and the third-largest natural gas producer in Southeast Asia. Major customers for Brunei's LNG exports include Japan, which takes around 85 percent of Brunei's LNG exports under a 20-year contract renewed in 1993, and South Korea, which imports about 11 percent of Brunei's exports. The Brunei LNG (BLNG) joint venture between Mitsubishi (25 percent), Shell (25 percent), and the Brunei government (50 percent) produces Brunei's LNG at the company's Lumut plant. Lumut produces about 330 bcf of LNG annually. The vast majority of BLNG sales are on a long-term contract basis, although there have been a few spot sales to Spain and the United States.



Long-term prospects for natural gas and LNG development in Brunei are excellent. BLNG has a master plan to expand its capacity by adding another 194 Bcf-per-year train to its existing five trains by 2008. The plan also includes further modernization of the existing plant, similar to the rejuvenation program carried out by Shell Global Solutions and completed in 1994. As a result of the program, the Lumut plant now operates at 140 percent of its design capacity.

In 2004, BLNG undertook the replacement of the plant's Main Cryogenic Heat Exchangers (MCHEx) after 30 years of operation. The first of four new MCHEx was erected in February 2004. BLNG is in the process of replacing the remaining MCHEx. The MCHEx replacement is expected to extend the life of the facility for another 30 years. Additionally, BSP contracted with Shell Global Solutions for a \$400 million revitalization of gas extraction facilities in the Ampa and Fairley fields.

Besides exports, Brunei would like to use its natural gas to develop domestic petrochemicals and energy-intensive industries. The government signed a memorandum of understanding with American aluminum producer, Alcoa, in September 2003 to study the feasibility of constructing a

\$1.5 billion gas-fired aluminum smelter in Seria. The Brunei Economic Development Board has reportedly offered discounted gas to the plant.

Electricity

Natural gas fuels all of Brunei's electricity generation.

Brunei's installed electric generating capacity in 2003 was 0.48 gigawatts (GW), all of which was natural gas-fired. Brunei's power demand is growing at a rapid rate of 7 to 10 percent annually. Brunei's power plants all operate single natural gas turbines, with the exception of the Lumut cogeneration facilities and the new Belingus Power Station. Household customers account for 38 percent of electricity usage in Brunei and represent 63 percent of customers, while the government accounts for 29 percent of usage but only 6 percent of customers. The oil and gas sector and commercial customers account for 15 percent and 19 percent of electricity usage respectively.

Profile

Country Overview

Chief of State	Sultan Hassanal Bolkiah (since October 5, 1967)
Location	Southeastern Asia, bordering the South China Sea and Malaysia
Independence	1 January 1984 (from UK)
Population (2005E)	372,361
Languages	Malay (official), English, Chinese
Religion	Muslim (official) 67%, Buddhist 13%, Christian 10%, indigenous beliefs and other 10%
Ethnic Group(s)	Malay 67%, Chinese 15%, indigenous 6%, other 12%

Economic Overview

Finance Minister	Sultan Hassanal Bolkiah
Currency/Exchange Rate (2/5/06)	US\$1 = 1.635 Brunei Dollar (BND)
Inflation Rate (2004E, 2005E)	0.9%, 1.5%
Gross Domestic Product (2005E)	\$5.9 billion
Real GDP Growth Rate (2004E, 2005E)	1.7%, 2.6%
Unemployment Rate (2002E)	3.2%
Exports (2004E)	\$4.5 billion
Exports - Commodities	crude oil, natural gas, refined products
Exports - Partners (2004E)	Japan 37.8%, South Korea 13.6%, Australia 11.1%, US 9%, Thailand 7.9%, China 5.9%
Imports (2004E)	\$1.6 billion
Imports - Commodities	machinery and transport equipment, manufactured goods, food, chemicals
Imports - Partners (2004E)	Singapore 33.1%, Malaysia 21.5%, Japan 7.3%, UK 6.8%
Current Account Balance (2004E)	\$2.9 billion

Energy Overview

Minister of Industry and Primary Resources	Pehin Dato Haji Abdul Rahman Raib
Proven Oil Reserves (January 1, 2006E)	1.4 billion barrels
Oil Production (2005E)	211.6 thousand barrels per day, of which 89% was crude oil.
Oil Consumption (2005E)	12.2 thousand barrels per day
Net Oil Exports (2005E)	199.4 thousand barrels per day
Crude Oil Distillation Capacity (January 1, 2006E)	8.6 thousand barrels per day
Proven Natural Gas Reserves (January 1, 2006E)	13.8 trillion cubic feet
Natural Gas Production (2003E)	0.4 trillion cubic feet

Natural Gas Consumption (2003E)	61.1 billion cubic feet
Recoverable Coal Reserves (2003E)	None
Coal Production (2003E)	None
Coal Consumption (2003E)	None
Electricity Installed Capacity (2003E)	0.5 gigawatts
Electricity Production (2003E)	2.7 billion kilowatt hours
Electricity Consumption (2003E)	2.5 billion kilowatt hours
Total Energy Consumption (2003E)	0.1 quadrillion Btus*, of which Natural Gas (65%), Oil (25%), Coal (0%), Nuclear (0%), Hydroelectricity (0%), Other Renewables (0%)
Total Per Capita Energy Consumption (2003E)	263.9 million Btus
Energy Intensity (2003E)	22,991 Btu per \$2000-PPP**

Environmental Overview

Energy-Related Carbon Dioxide Emissions (2003E)	5.4 million metric tons, of which Natural Gas (69%), Oil (31%), Coal (0%)
Per-Capita, Energy-Related Carbon Dioxide Emissions (2003E)	15 metric tons
Carbon Dioxide Intensity (2003E)	1.3 Metric tons per thousand \$2000-PPP**
Environmental Issues	seasonal smoke/haze resulting from forest fires in Indonesia
Major Environmental Agreements	party to: Endangered Species, Hazardous Wastes, Law of the Sea, Ozone Layer Protection, Ship Pollution signed, but not ratified: none of the selected agreements

Oil and Gas Industry

Organization	Brunei Shell Petroleum (BSP) dominates oil and natural gas production
Foreign Company Involvement	Royal Dutch Shell, Total, Mitsubishi, Fletcher Energy
Major Oil and Natural Gas Fields	Champion, Southwest Ampa, Fairley, Fairley Baram, Magpie, Gannet, Iron Duke, Rasau, Seria-Tali
Major Refineries (capacity, bbl/d)	BSP Sdn Bhd (8,600)

* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power. The renewable energy consumption statistic is based on International Energy Agency (IEA) data and includes hydropower, solar, wind, tide, geothermal, solid biomass and animal products, biomass gas and liquids, industrial and municipal wastes. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.

**GDP figures from OECD estimates based on purchasing power parity (PPP) exchange rates.

Links

EIA Links

[EIA - Country Information on Brunei](#)

U.S. Government

[CIA World Factbook - Brunei](#)

General Information

[Government of Brunei Official Website](#)

[Embassy of Brunei in the United States](#)

[Bru Net Homepage](#)

[Shell Brunei](#)

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